

## ABSTRACT

A method serves to compose a VPN (Virtual Private Network) over a plurality of networks, each of which is managed by a different Internet Service Provider (ISP). When a packet with a first capsule header used for composing a VPN in a first ISP network is transmitted to a second ISP network, a route for outputting the packet to the second ISP network is determined based on the information both in the capsule header and in the IP header. In addition, a second capsule header used for composing a VPN in the second ISP network is determined based on the above information.